



# Types of MTP Joint Problems



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## Joints in your foot

The metatarsophalangeal (MTP) joints are the links between your toes and the bones in the main part of your foot.

When the bones, ligaments, and tendons in an MTP joint are exposed to high pressure and force from things like your standing posture or poorly fitting shoes, the toes and bones in the joint can move out of alignment.

Misalignment changes the way your body weight is distributed and can put extra pressure on the joint, which can cause inflammation of the joint lining and destroy the cartilage. This results in pain and tenderness, which can make it hard to walk.

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## What increases your risk of MTP joint problems?

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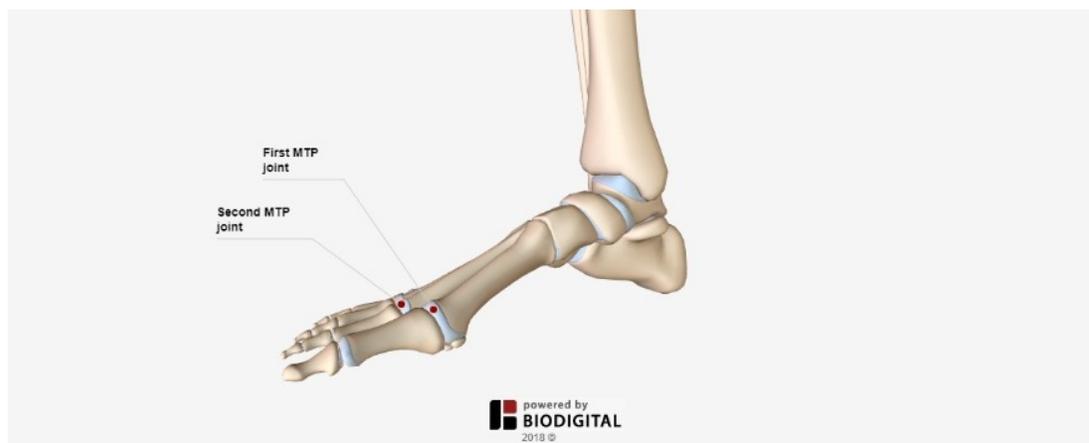
Diseases that cause inflammation in other joints or parts of your body can also affect the MTP joints, causing pain and problems walking.

Things that increase your risk for problems with your MTP joint are:

- unusual positioning of your foot, lower leg, or knee
- making poor choices in footwear
- having a chronic inflammatory condition

Although these conditions can be quite painful and debilitating, most can be effectively treated without surgery.

## What's the MTP joint?



An MTP joint connects one of your toes (a **phalangeal** bone or a phalanx) to a long bone in your foot (a **metatarsal** bone). There are five MTP joints on each foot — one for each toe — but the term “MTP joint” is often used to refer only to the big toe joint. This is the MTP joint that most frequently causes a problem.

The MTP joint allows your toes to bend away from your foot, which is important for walking with a balanced gait.

## MTP joint vs MCP joint

There's a similar joint on each of your fingers. It's easy to confuse these

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difference between the two is “**metatarsal**” refers to the foot and “**metacarpal**” refers to the hand.

The MCP joints of your hand aren't exposed to the stress of poorly fitting shoes or the forces and pressure from standing, so they aren't affected by many of the problems that affect the MTP joints.

However, conditions like osteoarthritis and rheumatoid arthritis that affect many joints throughout the body can also affect the MCP joints or the MTP joints.

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## Causes of MTP joint pain

There are two main categories of causes of MTP pain: biomechanics and arthritis.

### Biomechanics

Biomechanics refers to the way your bones, muscles, joints, tendons, and ligaments work together, along with the forces and stress applied to them, when you move. When the biomechanics are off, the pressure from weight-bearing shifts toward the front of the foot where your toes and MTP joints are, which causes problems including:

- **Bunions**. This is a triangular bony deformity that sticks out from the

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MTP to stick out. When this happens on the side of your little toe, it's called a bunionette. This condition is frequently caused by wearing poorly fitting shoes.

- **Turf toe.** This occurs when the foot pushes off the ground with the heel lifted, such as when a football player starts running from a crouched position. Too much force is placed on the big toe, and it overextends. This may only stretch the tissue, causing a little pain and swelling, or it can partially or completely tear the tissue and dislocate the MTP joint.

## Arthritis

Arthritis refers to joint inflammation. There are several types of arthritis that can affect the MTP joint. They all have similar symptoms, such as pain, stiffening of the joint that makes walking difficult, and swelling in and around the joint. These conditions are:

- **Gout.** This is an extremely painful condition. It happens when there is too much uric acid in your blood, and the excess forms crystals that settle into the joint. It most often occurs in the MTP of one of your big toes.
- **Osteoarthritis.** This is due to breakdown of the cartilage on the end of bones in the MTP joint. Cartilage acts as a cushion between the two bones in a joint. Without enough of it, the bones grind against one another, which can be very painful. This is the most common type of arthritis, and it gets worse and more common as you age. There is usually little stiffness in the morning. The joints begin to stiffen later in the day as you move around, getting progressively worse. The joints can be very painful during the night.
- **Rheumatoid arthritis (RA).** This condition causes the lining of the joints to become inflamed and swollen. Often, the small joints of the hands and feet, including the MTP joints, are affected. Joint stiffness usually occurs in the morning and eases as the day goes on.

According to the [American Academy of Orthopaedic Surgeons](#), the

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- **Psoriatic arthritis.** This is found in people who have psoriasis, a chronic autoimmune disease that causes a red rash with silvery scales on multiple areas of the skin on the body. It can also cause inflammation in the joints, including the MTP joints.
- **Septic arthritis.** This occurs when the joint becomes infected, usually with bacteria that has entered your bloodstream. It can also happen when medications, like corticosteroids, are inserted into the joint with a needle. The infected joint becomes very red and warm. An infected joint is a medical emergency, and you should see your doctor right away if you suspect it.

## MTP joint pain treatments

Treatment of MTP joint pain is aimed at reducing the inflammation in the joint that occurs from both biomechanical problems and arthritis and relieving the stress and pressure on the joint for biomechanical problems.

## MTP joint inflammation

Treatments for inflammation and related pain that you can use at home include:

- **nonsteroidal anti-inflammatory drugs (NSAIDs)**, such as ibuprofen and naproxen
- resting your foot and limiting physical activity to help improve the symptoms and speed up recovery
- using ice packs intermittently throughout the day
- reconsidering the best **shoes** for your feet
- trying new **strategies for being at work**
- **considering natural arthritis pain relief ideas**

Your doctor may suggest corticosteroid injections, which involve injecting medication directly into the joint. Or they may prescribe medications to treat the different types of arthritis to reduce joint inflammation

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At-home treatments for biomechanical problems include using a pad to cover and protect painful areas, like bunions, and resting your foot. Massaging around the MTP can also help unless it's too painful.

Treatments your doctor may use for biomechanical problems include:

- **Taping and padding the affected area.** This can reduce the pain, so you can be more active.
- **Orthotics.** These are devices placed in your shoe that redistribute the weight and pressure on the ball of your foot, including the MTP joints. They can help relieve the pain and stop further injury. Often, they are custom made for your specific problem. Sometimes, special shoes that work in a similar way are prescribed.
- **Physical therapy.** Your doctor may send you to physical therapy to relieve the pain and inflammation. Therapy with ultrasound is often used.
- **Surgery.** This is almost always the last resort, only used when everything else fails. There are a variety of procedures a doctor, orthopedic surgeon, or podiatrist can use to repair and realign the bones and other tissues in the MTP joint.

The most important thing you can do to treat and prevent biomechanical problems is wear [shoes that fit properly](#). Avoid shoes that squeeze your toes together, such as pointy-toe shoes or ones that increase the pressure on your toes and ball of your foot, such as high heels.

The front of your shoe (called the toe box) should be roomy enough to allow you to wiggle your toes. According to the [American Podiatric Medical Association](#), heels over 2 inches high shift your body weight and significantly increase the pressure on your toes and the ball of your feet. They should only be worn occasionally, if at all.

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## Other MTP disorders

There are a few things that cause pain around the MTP joint that are usually due to biomechanical problems but aren't caused by a problem in the MTP joint itself. These include:

- **Morton's neuroma.** This is an overgrowth of nerve tissue that develops between the heads of the metatarsals. It most often occurs between the third and fourth toes. It's characterized by numbness, tingling, or a burning sensation on the side of the toe when you walk. Stopping to rub the area usually makes it feel better.
- **Corns and calluses.** When an area of skin is repeatedly irritated, such as by constant rubbing from a tight shoe, the skin thickens to protect the area. Flat, wide areas of thickening are called calluses. Deeper thickening is called a corn. They often look like warts but aren't contagious.
- **Hammer toe and mallet toe.** This is when the first joint in your toe beyond the MTP permanently bends down, forming an upside-down V shape. It happens because the tendons on the side of your toe get too tight from misalignment of the bones. It's found on the second toe most often, but can affect the third, fourth, or fifth toe too. When this happens to the toe joint farthest from the MTP, it's called a mallet toe.
- **Capsulitis.** This is inflammation of the ligaments that form a capsule around the MTP joint. This most often happens to the second toe. If the ligaments get weak enough, the toe can become dislocated. It's sometimes misdiagnosed as a Morton's neuroma, but capsulitis doesn't cause numbness or tingling.
- **Stress fracture.** This is a fracture due to repeated stress and

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## The takeaway

The effects of excess pressure and force on the toes and several forms of arthritis can lead to painful, swollen MTP joints. Other problems can lead to pain around the MTP joint and ball of the foot. These conditions can be very painful and limit your activity, but they can usually be fixed or prevented with medications or orthotics.

The best way to avoid most of these problems and prevent them from getting worse if you have them is to wear low-heeled shoes that fit properly.

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